

Sequence Listing.ST25  
SEQUENCE LISTING

<110> BENSON, Timothy  
PRINCE, Donald Bryan

<120> CRYSTALLIZATION AND STRUCTURE DETERMINATION OF FEMA AND FEMA-LIKE PROTEINS

<130> 00236.US1

<140> Unassigned

<141> 2001-08-17

<150> US 60/226,239

<151> 2000-08-17

<150> US 60/226,269

<151> 2000-08-17

<160> 3

<170> PatentIn version 3.0

<210> 1

<211> 414

<212> PRT

<213> *Staphylococcus aureus*

<400> 1

Met Lys Phe Ser Thr Leu Ser Glu Glu Glu Phe Thr Asn Tyr Thr Lys  
1 5 10 15

Lys His Phe Lys His Tyr Thr Gln Ser Ile Glu Leu Tyr Asn Tyr Arg  
20 25 30

Asn Lys Ile Asn His Glu Ala His Ile Val Gly Val Lys Asn Asp Lys  
35 40 45

Asn Glu Val Ile Ala Ala Cys Leu Leu Thr Glu Ala Arg Ile Phe Lys  
50 55 60

Phe Tyr Lys Tyr Phe Tyr Ser His Arg Gly Pro Leu Leu Asp Tyr Phe  
65 70 75 80

Asp Ala Lys Leu Val Cys Tyr Phe Phe Lys Glu Leu Ser Lys Phe Ile  
85 90 95

Tyr Lys Asn Arg Gly Val Phe Ile Leu Val Asp Pro Tyr Leu Ile Glu  
100 105 110

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Asn Leu Arg Asp Ala Asn Gly Arg Ile Ile Lys Asn Tyr Asn Asn Ser  
115 120 125

Val Ile Val Lys Met Leu Gly Lys Ile Gly Tyr Leu His Gln Gly Tyr  
130 135 140

Thr Thr Gly Tyr Ser Asn Lys Ser Gln Ile Arg Trp Ile Ser Val Leu  
145 150 155 160

Asp Leu Lys Asp Lys Asp Glu Asn Gln Leu Leu Lys Glu Met Glu Tyr  
165 170 175

Gln Thr Arg Arg Asn Ile Lys Lys Thr Ile Glu Ile Gly Val Lys Val  
180 185 190

Glu Asp Leu Ser Ile Glu Glu Thr Asn Arg Phe Tyr Lys Leu Phe Gln  
195 200 205

Met Ala Glu Glu Lys His Gly Phe His Phe Met Asn Glu Asp Tyr Phe  
210 215 220

Lys Arg Met Gln Glu Ile Tyr Lys Asp Lys Ala Met Leu Lys Ile Ala  
225 230 235 240

Cys Ile Asn Leu Asn Glu Tyr Gln Asp Lys Leu Lys Ile Gln Leu Leu  
245 250 255

Lys Ile Glu Asn Glu Met Met Thr Val Asn Arg Ala Leu Asn Glu Asn  
260 265 270

Pro Asn Ser Lys Arg Asn Lys Ser Lys Leu Asn Gln Leu Asn Met Gln  
275 280 285

Leu Ser Ser Ile Asn Asn Arg Ile Ser Lys Thr Glu Glu Leu Ile Leu  
290 295 300

Glu Asp Gly Pro Val Leu Asp Leu Ala Ala Ala Leu Phe Ile Cys Thr  
305 310 315 320

Asp Asp Glu Val Tyr Tyr Leu Ser Ser Gly Ser Asn Pro Lys Tyr Asn  
325 330 335

Gln Tyr Met Gly Ala Tyr His Leu Gln Trp His Met Ile Lys Tyr Ala  
340 345 350

Lys Ser His Asn Ile Asn Arg Tyr Asn Phe Tyr Gly Ile Thr Gly Val  
355 360 365

Phe Ser Asn Glu Ala Asp Asp Phe Gly Val Gln Gln Phe Lys Lys Gly  
370 375 380

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Phe Asn Ala His Val Glu Glu Leu Ile Gly Asp Phe Ile Lys Pro Val  
385 390 395 400

Arg Pro Ile Leu Tyr Lys Phe Ala Lys Leu Ile Tyr Lys Val  
405 410

<210> 2

<211> 419

<212> PRT

<213> Staphylococcus aureus

<400> 2

Met Lys Phe Thr Glu Leu Thr Val Thr Glu Phe Asp Asn Phe Val Gln  
1 5 10 15

Asn Pro Ser Leu Glu Ser His Tyr Phe Gln Val Lys Glu Asn Ile Val  
20 25 30

Thr Arg Glu Asn Asp Gly Phe Glu Val Val Leu Leu Gly Ile Lys Asp  
35 40 45

Asp Asn Asn Lys Val Ile Ala Ala Ser Leu Phe Ser Lys Ile Pro Thr  
50 55 60

Met Gly Ser Tyr Val Tyr Tyr Ser Asn Arg Gly Pro Val Met Asp Phe  
65 70 75 80

Ser Asp Leu Gly Leu Val Asp Tyr Tyr Leu Lys Glu Leu Asp Lys Tyr  
85 90 95

Leu Gln Gln His Gln Cys Leu Tyr Val Lys Leu Asp Pro Tyr Trp Leu  
100 105 110

Tyr His Leu Tyr Asp Lys Asp Ile Val Pro Phe Glu Gly Arg Glu Lys  
115 120 125

Asn Asp Ala Leu Val Asn Leu Phe Lys Ser His Gly Tyr Glu His His  
130 135 140

Gly Phe Thr Thr Glu Tyr Asp Thr Ser Ser Gln Val Arg Trp Met Gly  
145 150 155 160

Val Leu Asn Leu Glu Gly Lys Thr Pro Glu Thr Leu Lys Lys Thr Phe  
165 170 175

Asp Ser Gln Arg Lys Arg Asn Ile Asn Lys Ala Ile Asn Tyr Gly Val  
180 185 190

Lys Val Arg Phe Leu Glu Arg Asp Glu Phe Asn Leu Phe Leu Asp Leu  
195 200 205

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Tyr Arg Glu Thr Glu Glu Arg Ala Gly Phe Val Ser Lys Thr Asp Asp  
210 215 220

Tyr Phe Tyr Asn Phe Ile Asp Thr Tyr Gly Asp Lys Val Leu Val Pro  
225 230 235 240

Leu Ala Tyr Ile Asp Leu Asp Glu Tyr Val Leu Lys Leu Gln Gln Glu  
245 250 255

Leu Asn Asp Lys Glu Asn Arg Arg Asp Gln Met Met Ala Lys Glu Asn  
260 265 270

Lys Ser Asp Lys Gln Met Lys Ile Ala Glu Leu Asp Lys Gln Ile  
275 280 285

Asp His Asp Gln His Glu Leu Leu Asn Ala Ser Glu Leu Ser Lys Thr  
290 295 300

Asp Gly Pro Ile Leu Asn Leu Ala Ser Gly Val Tyr Phe Ala Asn Ala  
305 310 315 320

Tyr Glu Val Asn Tyr Phe Ser Gly Gly Ser Ser Glu Lys Tyr Asn Gln  
325 330 335

Phe Met Gly Pro Tyr Met Met His Trp Phe Met Ile Asn Tyr Cys Phe  
340 345 350

Asp Asn Gly Tyr Asp Arg Tyr Asn Phe Tyr Gly Leu Ser Gly Asp Phe  
355 360 365

Thr Glu Asn Ser Glu Asp Tyr Gly Val Tyr Arg Phe Lys Arg Gly Phe  
370 375 380

Asn Val Gln Ile Glu Glu Leu Ile Gly Asp Phe Tyr Lys Pro Ile His  
385 390 395 400

Lys Val Lys Tyr Trp Leu Phe Thr Thr Leu Asp Lys Leu Arg Lys Lys  
405 410 415

Leu Lys Lys

<210> 3  
<211> 421  
<212> PRT  
<213> Staphylococcus aureus

<400> 3

Met Glu Lys Met His Ile Thr Asn Gln Glu His Asp Ala Phe Val Lys

## Sequence Listing.ST25

1 5 10 15

Ser His Pro Asn Gly Asp Leu Leu Gln Leu Thr Lys Trp Ala Glu Thr  
20 25 30Lys Lys Leu Thr Gly Trp Tyr Ala Arg Arg Ile Ala Val Gly Arg Asp  
35 40 45Gly Glu Val Gln Gly Val Ala Gln Leu Leu Phe Lys Lys Val Pro Lys  
50 55 60Leu Pro Tyr Thr Leu Cys Tyr Ile Ser Arg Gly Phe Val Val Asp Tyr  
65 70 75 80Ser Asn Lys Glu Ala Leu Asn Ala Leu Leu Asp Ser Ala Lys Glu Ile  
85 90 95Ala Lys Ala Glu Lys Ala Tyr Ala Ile Lys Ile Asp Pro Asp Val Glu  
100 105 110Val Asp Lys Gly Thr Asp Ala Leu Gln Asn Leu Lys Ala Leu Gly Phe  
115 120 125Lys His Lys Gly Phe Lys Glu Gly Leu Ser Lys Asp Tyr Ile Gln Pro  
130 135 140Arg Met Thr Met Ile Thr Pro Ile Asp Lys Asn Asp Asp Glu Leu Leu  
145 150 155 160Asn Ser Phe Glu Arg Arg Asn Arg Ser Lys Val Arg Leu Ala Leu Lys  
165 170 175Arg Gly Thr Thr Val Glu Arg Ser Asp Arg Glu Gly Leu Lys Thr Phe  
180 185 190Ala Glu Leu Met Lys Ile Thr Gly Glu Arg Asp Gly Phe Leu Thr Arg  
195 200 205Asp Ile Ser Tyr Phe Glu Asn Ile Tyr Asp Ala Leu His Glu Asp Gly  
210 215 220Asp Ala Glu Leu Phe Leu Val Lys Leu Asp Pro Lys Glu Asn Ile Ala  
225 230 235 240Lys Val Asn Gln Glu Leu Asn Glu Leu His Ala Glu Ile Ala Lys Trp  
245 250 255Gln Gln Lys Met Glu Thr Ser Glu Lys Gln Ala Lys Lys Ala Gln Asn  
260 265 270

Met Ile Asn Asp Ala Gln Asn Lys Ile Ala Lys Asn Glu Asp Leu Lys

## Sequence Listing.ST25

275

280

285

Arg Asp Leu Glu Ala Leu Glu Lys Glu His Pro Glu Gly Ile Tyr Leu  
290 295 300

Ser Gly Ala Leu Leu Met Phe Ala Gly Ser Lys Ser Tyr Tyr Leu Tyr  
305 310 315 320

Gly Ala Ser Ser Asn Glu Phe Arg Asp Phe Leu Pro Asn His His Met  
325 330 335

Gln Tyr Thr Met Met Lys Tyr Ala Arg Glu His Gly Ala Thr Thr Tyr  
340 345 350

Asp Phe Gly Gly Thr Asp Asn Asp Pro Asp Lys Asp Ser Glu His Tyr  
355 360 365

Gly Leu Trp Ala Phe Lys Lys Val Trp Gly Thr Tyr Leu Ser Glu Lys  
370 375 380

Ile Gly Glu Phe Asp Tyr Ile Leu Asn Gln Pro Leu Tyr Gln Leu Ile  
385 390 395 400

Glu Gln Val Lys Pro Arg Leu Thr Lys Ala Lys Ile Lys Ile Ser Arg  
405 410 415

Lys Leu Lys Arg Lys  
420